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ABSTRACT

The purpose of the study was to measure personal financial literacy levels of fourth grade students in Memphis, Tennessee and to explore the relationships between seven personal and social characteristics and the students' personal financial literacy. The sample produced low scores on five measure dimensions. Caucasian populations performed better than African American; high-income students performed better than low income students; and students with high-self esteem scored better on personal financial application items than students with low self-esteem. Findings indicate that further research is needed into the influences of personal financial literacy on children of different cultures. (Contains 103 references.) (Author/YDS)

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ED 469 633

The Personal Financial Literacy of Fourth Grade Students

A Thesis

Presented for the

Master of Science

Degree

The University of Memphis

Thomas Andrew Lucey

August, 2002

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Abstract

Lucey, Thomas A. M.S. The University of Memphis. August, 2002. The Personal Financial Literacy of Fourth Grade Students. Major Professor: Jerrie C. Scott, Ph.D.

The purpose of the study was to measure personal financial literacy levels of 4th grade students in Memphis, Tennessee and to explore the relationships between seven personal and social characteristics and the students' personal financial literacy. The sample produced low scores on five measure dimensions. Caucasian populations performed better than African Americans; high-income students performed better than low income students; and students with high-self esteem scored better on personal financial application items than students with low self-esteem. Findings indicate that further research is needed into the influences of personal financial literacy on children of different cultures.

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To the Graduate Council:

I am submitting herewith a thesis written by Thomas A. Lucey entitled "The Financial Literacy of Fourth Grade Students" I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science with a major in Instruction and Curriculum.

Jerrie C. Scott, Ph.D.
Major Professor

We have read this thesis and
recommend its acceptance:

Steven M. Ross, Ph.D.

Graves Enck, Ph.D.

Accepted for the Council:

Karen D. Weddle-West,Ph.D.
Interim Assistant Vice
Provost for Graduate Studies

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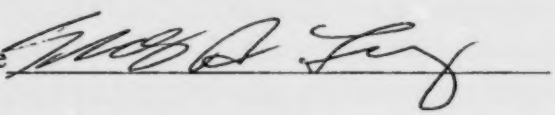
Signature 

Date July 15, 2002

Dedication

For Grandpa Joe, who said there were more important things than money,

and for Hannah and Benjamin, two miraculous children.

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LIST OF SYMBOLS OR ABBREVIATIONS

ASKERIC	Educational Research Informational Center
M	Mean
N	Number of observations
n	Number of observations in the subsample
p	probability
PR	Passing Rate
r	Pearson coefficient of variance
SD	Standard Deviation
SPSS	Statistical Package for the Social Sciences
TCAP	Tennessee Comprehensive Assessment Program

Chapter 1

Introduction

Problem

Each of our children has the potential to earn over a million dollars in his/her lifetime, and probably will not end up being rich. For its apparent self-contradiction, this paradox involves a very realistic backdrop. A simple mathematical calculation shows that an 18 year old person beginning a career earning an annual income of $20,000 will earn $1,709,678 by the time he/she is 60 years old (presuming continual employment and a 3% annual salary increase to accommodate cost of living increases). Our children have the potential to manage a great deal of money.

However, U.S. Census data show an increasing financial disparity in the United States' population, as fewer people possess the nation's wealth and income, prompting significant societal challenges (Lindjord, 2000; Public Broadcasting Service, 2002; U.S. Census Bureau 2000). By understanding the financial literacy of our youth and the associated development processes, the research community may better understand foundational patterns and processes that prompt this societal inequity. This knowledge may lead to more effective educational practices that alleviate these conditions.

The research community does not appear to have formally defined the concept of personal financial literacy. For purposes of this study, I offer, here, a working definition of personal financial literacy. Personal financial literacy involves three parts. "Personal" means relating to a self or a person. "Financial" pertains to finance, or money or other liquid resources, although it comes from the old French, meaning to pay a ransom. It also means the study or science of money management. "Literacy" may be interpreted as the ability to read or write. In this context, one may consider literacy the ability to comprehend or, more importantly, to exercise or practice. Thus, personal financial literacy represents one's ability to comprehend and practice management of his/her own money

and financial obligations. As defined by the Jumpstart Coalition curriculum standard benchmarks, personal financial literacy involves four elements, Income, Money Management, Spending and Credit, and Savings and Investments. Personal financial literacy should be distinguished from general economic studies because economics involves the finance related activities of a large group of people, personal financial literacy represents one's responses to their economic environment.

When they leave high school, American students do not possess basic personal finance skills (Jumpstart Coalition, 1997). Recent surveys document the worsening of this financial illiteracy, continuing a trend that may have existed for some time (Jumpstart Coalition, 2000, 2002; Wang, 1993). Students' positive social development and mobility necessitate sound personal financial literacy; thus the declining financial knowledge and application levels portent societal and educational problems.

The trend forecasts a worsening of the personal economic woes that already exist. National Public Radio (2001) conducted and reported on a survey that found a significant percentage of Americans consider poverty to be problematic for this country. This study also found that Americans consider the federal government's poverty definition as too low. To illustrate, 64% of survey respondents considered a family of four on an annual income of $20,000 as poor. The federal government does not consider a family of four earning more than $17,029 a year as poor. Survey respondents also consistently listed drug abuse, medical bills, part-time/low wage jobs, single parent families, absent motivation, and declining moral values as major poverty causes.

Deficiencies in academic processes may cause this national problem (Bosshardt & Watts, 1994; McKinney, McKinney, Larkins, Gilmore, & Ford, 1990; Stanger, 1997); however, the academic setting may not be the only source of students' financial literacy. Nonacademic sources appear to influence teenager students' financial cognition more than classroom experiences (Jumpstart Coalition, 1997, 2000, 2002). Indeed, nearly all the

teenagers in an American Savings Education Council (ASEC) (1999) survey indicated that their parents represent their primary financial information sources. However, many parents do not practice sound financial behaviors, suggesting they may not provide their children good financial advice (ASEC, 2001; "Teach Your Children", 2001).

Given the possible influence of parents, it is reasonable to assume that financial literacy should be assessed before students enter high school. Financial literacy is especially important for a child at an early age, because this period observes the formation of students' value judgments and cognitive skills. Although recent efforts of financial literacy advocacy groups, spearheaded by the Jumpstart Coalition, have only developed and successfully encouraged personal economic curriculum standards in thirty states (Jumpstart Coalition, n.d.), most publicized studies focus on the personal financial knowledge of teenagers (ASEC, 1999; Boyce & Danes, 1998; Jumpstart Coalition, 1997, 2000, 2002; Stanger, 1997), not that of elementary students.

Of the studies conducted on elementary grade students, most focus on students' consumer socialization processes (Danes, 1994; John, 1999; Moschis, 1985; Ward, 1974), which represent one facet of personal finance. More research on the financial literacy of elementary students is needed to provide indicators of patterns in future financial learning experiences. This study explored the relationship of personal and social characteristics of elementary school students to their financial literacy. It investigated these relationships in students of an elementary age in the Memphis City Schools in Memphis, Tennessee, to discover how the various characteristics related to five financial literacy measure dimensions: total personal financial literacy, money management, spending and credit, financial definitions, and financial applications. The seven characteristics explored by this study were gender, race, income, first language, outside activities, learning method, and self-esteem. This study aimed to provide the groundwork for understanding systemic

developmental processes and prompt further research into the poor and worsening financial literacy levels of our elementary students.

Chapter 2

Literature Review

The lack of personal financial knowledge among high school students represents a well publicized topic (ASEC, 1999; Boyce & Danes, 1998; Jumpstart Coalition, 1997, 2000, 2002; Stanger, 1997). Research suggests that developmental, educational, and emotional factors may play roles this lack of financial awareness. Given the complexity of these difficulties, more information is needed about the factors associated with the financial literacy of younger children. The following presentation describes research that has been conducted on factors that influence personal financial literacy.

Consumer Socialization

Consumer socialization represents but one aspect of personal financial literacy. Consumer socialization research refers to studies largely involving only one's learning skills to acquire goods and services for personal use and does not involve debt acquisition or extinguishment. Consumer socialization is a subdiscipline of personal financial literacy. The following presentation describes research into consumer socialization.

Marshall and Magruder (1960) related the development of children's financial knowledge and practices to parent practices. They studied over 500 rural Kentucky children and their parents to consider child financial behaviors and parent financial practices. The researchers interviewed the children, aged 7, 8, 11, and 12, about naming coins and the coins' purchasing power, the children's experiences with using money, gifts and earned money, and materialistic attitudes. Well-known community members interviewed parents about their practices. Marshall and Magruder found that coin and purchasing power scores increased with age, as did children's experience with money. Materialistic attitudes appeared to decline with the children's age. Marshall and Magruder's research noted changes in child financial knowledge and responsibilities with age and related these findings to financial practices exercised by parents. This study

provided no information to validate the instruments employed, and involved a homogeneous population (Caucasian) in a semi-rural setting, so the findings have limited generalizability.

Ward (1974) summarized the pioneering studies of children and money and provided direction for future research. Ward used the term "consumer socialization" to refer to a child's financial learning process. He defined consumer socialization as "the process by which young children acquire skills, knowledge, and attitudes related to their functions as consumers in the market place" (p. 2). He clarified that this definition was limited to market-place transactions. Thus, this concept represented one aspect of a child's personal financial literacy, falling under the areas of money management and spending and credit. Ward likened the child socialization process to Piaget and Kohlberg's developmental "function of stages in cognitive organization between infancy and childhood" (p. 6). He also noted the importance of Strauss' research that observed children may not possess immature logical and reasoning processes compared to adults, but may employ those that are different.

Moschis' (1985) catalytic work reviewed previous research efforts and theories about parents' influence on a child's consumer learning. He identified four salient factors: parental influence on child, child's influence on parent, spouse's influence on spouse, and sibling's influence on siblings. Danes and Dunrud (as cited in Danes, 1994, p. 129) described a fifth component, the influence of the family of origin, that "brings into the new family a whole set of values, attitudes, standards, norms and behaviors from their own financial socialization" (Danes, 1994, p. 129).

Shah and Mittal (1997) explored the relationship between intergenerational influence (IGI) and consumer socialization. The publication did not cite any of Danes' work. Shah and Mittal distinguished the two concepts of intergenerational influence and consumer socialization in three ways: first, consumer socialization involved various social

agents, where IGI involved familial limitations; second, familial contexts limited consumer socialization in a parent to child process, where IGI involved multidirectional influences; and, finally, consumer socialization began in early childhood, where IGI began when children begin independent decision making processes. While Shah and Mittal expressed the opinion that the processes and results of early childhood family socialization differ from IGI, they admitted to not clarifying the nature of the differences except by three examples: that imitation prompts childhood socialization; that parents serve to influence, rather than control or model during infancy and childhood; and that despite low strength of family relationships, infancy and childhood are influential developmental stages.

John (1999) developed a comprehensive interpretation of consumer socialization research that formulated comprehensive stages of consumer socialization development. By providing a summary of relevant research, constructing a developmental theory, and providing direction for future studies, John modernized consumer socialization in the manner Ward (1974) had summarized consumer socialization's pioneering studies.

John proposed three stages of consumer socialization in children based on the child development work of Barenboim, Piaget, Roedder, and Selman (as cited in John, 1999, pp. 184-186). These stages are the Perceptual Stage (ages 3-7), the Analytical Stage (ages 7-11), and the Reflective Stage (ages 11-16). Applying consumer socialization research findings, John pieced together tangible characteristics and expectations for each stage. Appendix A contains a summary of the characteristics associated with these stages and specifies the findings, characteristics, and expectations associated with the analytical stage, which relate most to my study. Developmental stages for consumer socialization have been extended to discussions of developmental stages in personal financial literacy.

Development and Intelligence Factors

There is a growing body of literature on the developmental phases of financial literacy. Factors in a child's formative years shed light on the systemic causes of personal

financial literacy. Research describes personal finance as a cognitive concept that children learn through social and modeling means (Brenner, 1998; Kourilsky & Kehret-Ward, 1984; Schug, 1987). Indeed, Kagal, Battalio, and Green (1995) believe that the entire animal kingdom possesses instinctive economic tendencies. Personal financial literacy consists of personal, emotional, and instinctive elements that require self-discipline and self-esteem for proper comprehension and application (Hira & Mugendao, 1999). The character traits or tendencies necessary for sound financial comprehension develop from pre-school (or even before) through Grade 4 (Cain & Dweck, 1995).

Parallels may exist between developmental processes associated with personal financial literacy and economic understandings. Studies of economic comprehension recognize that just as children progress through stages of cognitive development, they also progress through stages of economic cognition (Laney, Frerichs, Frerichs, & Pak, 1996; Schug 1987; Schug & Birkey, 1985; Strauss,1952). Researchers have determined different developmental stages. For example, Strauss (1952) determined nine stages of economic cognition. in children from ages 5-12 years, and a substage for children 3-5 years. Furth (as cited in Schug, 1987, p. 509) condensed Strauss' work to five sub-states: value = size (mean age of 5 years, 4 months), value differs from size (mean age 6 years, 5 months), numeral value and changes (mean age of 7 years, 1 month), shop uses customer's money to buy goods (mean age of 8 years, 9 months), and profit and owner (10 years, 7 months).

Dansigner (as cited in Schug, 1987, p. 509) observed two stages, a perception of transactions as a ritual and as a reciprocal exchange. Furth, Baurt, and Smith (as cited in Schug, 1987, p. 509) recognized four stages of reasoning about social institutions, and Johoda (as cited in Schug, 1987, pp. 510-512) identified four stages, each, of understanding profit, and understanding profits in financial institutions. Schug and Birkey (1985) ascertained that children's cognition of economic processes grows at different rates and may vary depending on their environments. Because cognitive skills are not fully

developed in early learners, schools do not typically offer economics as a separate academic discipline in primary and early elementary education.

Sternberg and Odagaki (1989) espoused a "triarchic" theory of intelligence, consisting of three elements of human cognition. The first element lies in what Sternberg terms "information processing components underlying thought" (Sternberg & Odagaki , 1989, p.163). The components consist of "metacomponents" (or defining the nature of problem) (Sternberg, 1989, p.163), "performance" components (or solving the problem) (Sternberg, 1989, p.164), and "knowledge or acquisition" components (or learning to solve problems). The second element involves application to experience. This process consists of three components, "adaptation", "selection", and "shaping" (Sternberg, 1989, p.165). The final element lies in the "intellectual function in everyday contexts" (Sternberg & Odagaki, 1989, p.165). This multidimensional concept suggests that financial comprehension may stem from different developmental sources and contexts. While this theory may contribute to reconciling personal economic literacy and child thought processes, John's consumer socialization stage theory represents the prevalent model.

Economics Education

Personal financial cognitive theories do not guarantee educational successes. Overall, personal finance learning materials and teaching techniques do not relate to cognitive development theories (Brenner, 1998; Koeller, 1981). Abysmal textbook quality pervades the educational setting (Harmon, Hendrick & Fox, 2000; Loewen,1995; Sternberg, 1996), leaving classrooms dependent on alternative teaching resources. Commercially donated classroom financial educational materials frequently contain commercial bias, resulting in poor advice (Stanger, 1987). Laney et al. (1996) demonstrated that a combined cooperative and mastery learning method prompts the most effective learning and retention process for economics at the primary grade level.

Chamberlin (1978) sampled attitudes about consumer economics education from K-6 teachers in three western Canadian provinces. Chamberlin listed eight consumer topics (advertising, selling techniques, money management, economic systems, decision making, shopping, hazardous products, and rights and responsibilities) and asked teachers which of the topics should be taught, which they were teaching, and which they planned to teach in the following year. Teachers overwhelmingly reported hazardous products and rights and responsibilities as the areas that should be covered the most. Money management was the third highest item, and selling techniques was the least favored area. The researcher found advertising and rights and responsibilities as the areas most taught. Shopping and selling techniques represented the areas taught the least.

Teachers planned to teach advertising during the next year far more than any other topic. They also mentioned plans to teach about hazardous products and rights and responsibilities frequently. Interestingly, less than half the teachers reported immediate plans to teach shopping and selling. Teachers' beliefs about the importance of consumer studies held consistent across grades, but varied by province.

Only about one-third of the respondents described curriculum change as helpful to assisting to teach personal economics. A substantial percentage of teachers wanted assistance: they desired government resource centers the most, much more than teacher training services. Of the devices for learning, teachers' recommendations included class activities/suggestions and simulation games.

Chamberlin's research illustrates some disparities of opinion between teachers' and policy makers' values in personal economics. These disparities are important because such inconsistencies challenge the establishment of appropriate learning content and attitudes in the classroom. Economic systems, and selling techniques, topics that one might teach aspiring entrepreneurs, held little worth in teachers' views. Aside from advertising, teachers expressed most interest in topics promoting consumer awareness and health

rather than wealth acquisition. In other words, teachers largely espoused defensive or protective consumer oriented education, where the policy makers may advocate offensive (aggressive) income producing and financial management education. Teachers valued topics that also created a sense of responsibility within students, not only for themselves but for the community. In my review of the 1979-2000 citation indexes, I did not find any references to Chamberlin's study.

Since personal financial literacy represents a subdiscipline of economics, economic education research provides insight into patterns and tendencies in the personal finance realm of study. Bosshardt and Watts (1994) demonstrated that students appear to comprehend economics better from Grades 4-10 through formal economics courses taught by teachers with economics classroom exposure. Most teachers of these grade levels do not appear to possess sufficient economics education or skills to effectively convey this important information, however (McKinney et al., 1990; Sosin, Dick, & Reiser, 1997).

While teacher ownership of economic skills makes a difference in student learning, teachers need to learn economics teaching principles to optimize student learning. Sosin et al. (1997) assessed 3rd, 4th, 5th, and 6th grade students' learning of four groups of economic concepts: Basic, Economic Systems, Markets and Prices, and Macro and International Economics. The researchers compared pretest and posttest results in classes taught by teachers trained in teaching economics to those in classes where teachers were not trained. Sosin et al. concluded that economics could be taught if teachers are trained, and concluded that economics may be taught as early as third grade. Interestingly, they did not find any differences in learning by students of different ethnic or income backgrounds.

In summary, when trained to teach economics, teachers favorably affect learning processes. Unfortunately little research has been conducted on learning in elementary levels. Poor classroom materials exist and teachers have different instructional content priorities than policy makers, impairing formal education processes. While most studies

about children and personal economics have been conducted on teens, surprisingly little research has been published about personal economics and young children. I believe childhood personal economics learning processes lay the foundations for future financial literacy experiences and decisions. The existing research on children and personal economics appears to be disjointed, with few studies involving comprehensive literature reviews. The need for such important research pervades many child development stages, including early childhood. Wang's (1993) disclosure that (unspecified) financial experts believe children at age three may understand the concept of money affirms this need for early childhood financial learning research.

Learning Environments

The academic setting does not provide the sole basis for child-development and academic achievement. Vygotsky (1978) distinguished humans from animals by observing that animals do not develop historical and cultural perceptions as humans. Humans realize and change behaviors within these contexts. Bronfenbrenner (1979) observed that children develop within a context of several interacting societal systems, affecting behavior in different manners.

Students report that they learn the most about money from their parents (ASEC, 1999; Jumpstart Coalition, 1997, 2000, 2002). Based on his review of research literature, Moschis (1985) posited ways families influence the consumption attitudes of children. These familial influences affect child consumption processes and behaviors and vary based on socio-demographic characteristics as well as family communication structure and processes.

Danes (1994) studied parent attitudes about when to share financial information with children or involve them in family financial decision-making processes. The parents evaluated 27 financial education topics for the appropriate age ranges from the categories

provided. The age ranges were: 8 years or less, 9-11 years, 12-14 years, 15-17 years, 18-20 years, 21-23 years, 24-26 years, 27 years and older, and never.

The study found a low degree of consensus among parents concerning appropriate topics for children at age 9-11 years, roughly equivalent to grades 4-7. The study found a higher degree of consensus for children aged 8 years or younger. Danes reported that 7 of every 10 parents believed children aged 8 or younger should receive an allowance and reported that nearly two-thirds believed children should open a savings account.

While Danes (1994) concluded that much discrepancy exists in parent perceptions of children's (aged 9-17's) readiness to address family financial issues, such uncertainties might have extended to earlier ages if the instrument had provided more consistent age groupings in its response alternatives. Wang (1993) mentions that children may possess the ability to grasp financial concepts by age three. This is the age at which corporations begin to target children with advertising (Holst, 1999). By breaking the group of less than age eight down into smaller groupings, Danes may have found more precise information concerning parental certainty of age appropriateness of learning family financial issues.

In summary, children are dependent on their home environments for financial learning, but parents differ in their perceptions of the age appropriateness of children for learning financial concepts. The dependency on non-academic environments is also found among teenagers.

Teenagers develop their personal financial literacy through different manners. High school students who reported learning most about managing their money from media sources, from handling their own funds, or from their family demonstrated stronger cognizance of personal finance skills than those learning at school in class (Jumpstart Coalition, 1997, 2000). Of these groups, only those learning from media sources scored more than 60% on a test of basic financial skills (Jumpstart Coalition, 1997). None of the groups scored above 55% on the follow-up test of these skills (Jumpstart Coalition,

2000); however, in the latest study, the highest any group attained was 52.5% (Jumpstart Coalition, 2002). Only two groups, those learning at home from the family and those learning from experience managing their own funds, performed better than students who learned at school in class. Varcoe et al. (2001) reported that students in juvenile hall or probation programs, pregnant and parenting students, and public school students prefer to learn about money in a structured educational setting. But most students appear to learn about money outside the school setting (at home particularly) with unsatisfactory results.

Varcoe et al. (2001) provided information about different student financial attitudes using a sample of teenagers from different social environments. The researchers studied the attitudes of teens in southern California juvenile hall/probation, migrant education programs, pregnant and parenting programs, public high schools, and youth groups about the their perceptions about money, its use, and related education processes. The researchers found that students thought money was important to buy what they needed, but this finding broke down along the groups' life conditions. The pregnant and parenting group almost unanimously held this perspective (93%), while teens in youth groups affirmed this reason at nearly half that rate. The researchers posited whether this difference resulted from parents giving the latter group the material things they want. Teens in youth groups affirmed more frequently that money's ability to buy things that they wanted (versus needed) was most important.

Expressions about desired money topics also varied by group. Teens in the juvenile hall and migration groups both expressed strong interests about how to file tax returns. Pregnant and parenting students and those in the juvenile hall group expressed strong interests in learning how to open and use savings accounts. Pregnancy and parenting students also expressed a strong interest in learning about marriage and money. Public school and migrant students expressed strong interest in saving for college. Students from youth groups largely did not want additional information.

Although not commented upon by Varcoe et al., published statistics also indicated that the majority of teens in the juvenile hall, migration, and pregnancy groups mostly reported having no savings or investing accounts. Teens in the juvenile hall and migration groups expressed the most desire for learning about money through groups outside of school. Teens in the pregnancy, school, and youth groups expressed the most desire to learn about money inside of school, however.

Teenagers learn about money in different manners. The importance of what teenagers learn about money depends on their social setting. Studies of adults further illustrate the importance of non-school environments on financial literacy

Hira (1997) analyzed responses of a random sample of Iowa adults and a convenience sample of Iowa college students. The study found that the college students were more involved in their own money management than older respondents were at that age. College aged students also reported being less involved in their family's financial matters than the older respondents were. The study also confirmed previous research that had identified parents as the primary influence on financial habits. While parental influence was consistently reported as a major influence, younger participants reported other societal influences more than older participants. These influences included extended family, peers, and television. Thus, as our society has become more media involved and less nuclear family centered, influences on personal financial literacy learning have changed as well. The study provided little support for the effects of formal consumer education processes; however, I believe these findings do not suggest that formal consumer education processes cannot affect change. They merely show that the processes have not yet.

Esteem

Conditions for student achievement may provide parallels for conditions for developing personal financial literacy. One influential factor on student achievement that

has been investigated and that may related to personal financial literacy is self-esteem. Research relates child self-esteem and student achievement (Cain & Dweck, 1995; Wiggins, Schatz, & West, 1994; Zimmerman, Copelands, Shope, & Dielman, 1997). Cultural contexts may influence esteem. Studies indicate academic performance of students from noneuropean-rooted cultures appear to involve different patterns, however (Gaskin-Butler & Tucker, 1995; Smith, 1994).

Child perceptions of parenting-motivational practices appear to influence self perceptions of high school academic achievement (Leung & Kwan, 1998). Indeed, studies also indicate that long-term student success and achievement stem from environments at the primary and secondary levels (Anderman, Hodge, & Murdock, 2000; Cote & Levine, 2000) .

Erikson (1968) noted that Freud theorized the foundations of self-esteem in child self-love, this self-love's experiential support, and in love for others. Theorizing that this process becomes pronounced during school years, Erikson expanded the concept by solidifying its development within a purposeful societal context. He theorized that children identify themselves with individual interests. In this process, they emulate admired adults who serve as role-models for patterns the children will follow in adulthood.

According to Erikson, children in school experience a challenge of industry versus inferiority. He identified inferiority as a developmental risk that may occur from emotional and/or expectational inconsistencies between the pre-school environment and those environments previously experienced. He also expressed concern about the risks in two extremes in elementary school practices (over-emphasis of self-restraint an duty, and over-permissiveness in self-exploration) and about children's overacceptance of work at the expense of imagination and playfulness.

Phelan and Schvaneveldt (1969) studied the attitudes of adolescent siblings and their mothers in rural and urban settings. The researchers found significant relationships

between self perception and siblings' spending and savings patterns, between mothers' perceptions and siblings spending and savings patterns, and between parent and adolescent reports of spending and saving patterns. They also found on three out of four tests, the children's ability to handle money was independent of similarly guiding practices.

Phelan and Schvaneveldt (1969) observed that many variables related to savings and spending patterns: sibling and mothers' perception of social class, siblings perception of age, mothers' perception of sibling's ordinal position, siblings perception of father's occupation, sibling and mothers' perceptions of mother's education attainment, sibling and mother's perceptions of supervision, and sibling perception of difficulty saving money from one week to the next. Another interesting observation was that mothers still guided siblings in similar manners, despite observing child differences.

While this study involved only Caucasian students, and employed inconsistent academic institutions in the sampling process (urban students from a high school, rural students from a junior high school), it supported the relationship between familial attitudes and children's money management developmental patterns.

Harter (1982) recognized that self-esteem involves many dimensions, initially identifying four: cognitive, social competence, physical competence, and general self-worth. Child awareness of these dimensions expands as the child matures (Harter & Pike, 1984). Harter and Buddin (1987) noted that as children develop cognitively, their perception of different emotions does also. They commented that "...studies indicated that young children are more likely to deny the existence of negative emotions and negative self attitudes. This tendency appears to be due, in part, to confusion between wishes and reality" (p. 398).

Self-esteem may not play a role for students who move in or out of a school during a year, for students whose mothers work, for students from single-parent homes, and for students who have received counseling, therapy or are considered "at risk" (Wiggins et al.,

1994). Beliefs about self, others, norms, and changes in values have been demonstrated to change child behaviors as well (Schaefer, 1991).

Clearly many environmental and esteem influences may affect the academic achievement, and therefore, the economic comprehension of children. Personal finance may represents a different thought process for individuals than general economics. I think that personal finance requires certain psychological tenets or practices for success, just as general economics and entrepreneurially related environments do. As a former financial professional, I maintain that personal finance involves a slightly different set of strategies (such as discipline and restraint) which, if not properly understood or practiced, may result in impulsive and spontaneous actions. The consequences of these actions could severely alter one's lifestyle.

Behavioral Relationships

High school seniors in states with high bankruptcy rates do not demonstrate the financial literacy of peers in other states (Jumpstart Coalition, 1998). Clements, Johnson, Michelich, and Olinsky (1999) studied patterns in Ohio bankruptcy filers. Filers most often reported "over-use of credit" as their reason for filing bankruptcy. The next three reported reasons (lack of financial skills, medical expenses, and divorce) occurred much less frequently than credit use, but in close frequency to each other. Padusk and Allred (as cited in Taylor & Overbey, 1999, p.39) found that financial problems are rooted in irresponsible and dysfunctional behaviors. I believe that three of these four aforementioned reasons may involve preventable causes. The unpreventable reason, medical expenses, may possibly be avoided with proper health care; unless one experiences good living conditions, health insurance becomes prohibitively expensive unless purchased through an employer or a large group. Clements et al. also noted that bankruptcy filers used credit most frequently for clothes, household goods, bills, cash advances, and car repairs, items that are largely discretionary. This information suggests that financial failure involves,

from whatever motivation, a strong element of spending for items wanted, rather than basic spending for necessities.

An interesting condition mentioned by Clements et al. (1999) involves the low income situations of many filers (less than $30,000 annual income). This situation speaks to society's struggles with purchases for self-fulfillment, rather than basic needs. Clements et al.'s study indicates that the reasons for bankruptcy and the uses of credit are largely voluntary and preventable. Consumerism represents a phenomenon of choice that can have problematic consequences.

Financial patterns also represent psychological indices. Hira and Mugenda (1999) noted that self-worth might motivate adults' perceptions of financial situations and spending behaviors. The research indicated that self-worth was defined, not in financial resources or holdings, but through perceptions. While these patterns did not vary with age, income, marital status, and gender, the researchers noted that differences existed in patterns between different education and income levels, however.

Taylor and Overbey (1999) found that conflicts occurred due to couples' individual financial perceptions, commenting that "conflict over financial issues often has its roots in battles over power, hopes, and dreams and different ideas over how incomes should be used" (p. 39). The study found that the most conflicts occurred when a "saver" perceived the partner as a "spender." The least conflicts occurred when a "saver" perceived the partner as a "saver." Conflicts with "spenders" perceptions of partners as "spenders" or "savers" occurred within a frequency between the saver-spender and saver-saver relationships.

Personal Factors

Several factors appear to affect economic comprehension. Research suggests that economic comprehension relates to socio-economic levels, ethnicity, and gender (Kourilsky, 1987; Walstad & Soper, 1988). At the college level, personality affects

student performance in economics (Ziegart, 2000). Women are less likely than men to complete economics principles courses. African American and Hispanic American students are likely to complete principle courses, but have lower probability of further studies than Caucasians (Borg & Shapiro, 1996; Ziegert, 2000).

If processes for personal financial literacy development parallel those for other types of academic achievement, then other circumstances may affect development of financial literacy skills. Cooper, Valentine, Lindsay, & Nye (1999) identified after school activities associated with academic achievement. Wynstra (1995) identified research examining the effects of television watching on student achievement. Parental attitudes toward academic processes and maternal domestic language have been shown to affect child reading achievement (Anderson, 1995; Crawford, 1996; Gauvain, Savage, & McCollum, 2000).

Hollister, Rapp, and Goldsmith (1986) researched methods of obtaining money, money-handling practices, and consumer practices of Caucasian 6th graders in Florida. These researchers found no gender differences in consumer or money-handling practices, yet they noted that girls generally received allowances while boys earned money regularly. The study observed significant differences between the money handling practices of students regularly earning money and those who did not earn money. The published findings described neither the circumstances concerning administration of the pilot study nor the sampling process.

While the researchers noted no significant difference between boys' and girls' money handling practices, Table 2 of the findings (Percentages of Children's Responses to Handling Practice Section) showed that boys had higher Frequently/Always rates for every savings statement (all of which affirm saving habits) offered while girls had the higher response rates for "Never/Seldom" items. The authors also noted that the participants expressed "skating" as the subject's highest spending preference. Table 4 (Amount of

money spent by Boys, Girls, and Total Listed by the Top Four Categories and Percents) lists "Video Games" as the largest, or co-largest, category for spending by only boys in each of the first, second, and third "amount spent" classifications. These findings indicate regular acquisition of devices prompting spontaneous mental reactions.

Bowen, Lago, and Furry's (1997) review of literature from 1965-1995 found little research on money management practices of low income, African American, and Hispanic American families. They observed that low-income families are more likely to have trouble saving, less likely to discuss finances openly with children, less likely to use formal banking services, and less likely to search for product information before making purchases. Between cultures of color, they found differences in spending patterns, savings and investment practices, credit use, family money management, and financial socialization.

Children and Personal Economics

Given the practical importance of this topic , a review of research for studies concerning personal financial literacy of elementary school students provided surprisingly few results. My February, 2002, review of the ASKERIC data base provided few current documents concerning personal financial literacy of elementary school students. No documents were found through searches using "Financial Knowledge" or "Economic Knowledge" and "Elementary Schools" and "Students" as descriptors. Searches using "Personal Economics", "Financial Education" and "Financial Knowledge," each combined with "Elementary Schools" as descriptors did not provide any documents either. A search using "Financial Education" and "Children" provided nine documents, only one since 1986. That document was a conference summary. The search found only 12 documents under "Financial Literacy," only two related to children; one is cited herein, the other, from 1992, concerned math comprehension activities. None of the 35 documents found through a search under "Money Management" and "Elementary Schools" was published

before 1996. A search found 53 documents under "Consumer Education" and "Elementary Schools"; except for an 1999 ERIC document on health and physical education, none was more current than 1996. A search under "Money", "Elementary Schools" and "Students" returned 24 documents, none more recent than 1996. A search under "Financial Knowledge" found only nine documents, the most recent being two articles published during 2000 about college students and about adults. A search under "Money Management" and "Children" for the years 1999 through 2002 found eight documents; this study cites the relevant journal article below.

McKenzie (1970) assessed the economic literacy of 4th grade students in rural southwest Virginia by asking students about motivation for economic activity, establishment of prices, the relationship between consumer practices and sales quantities, and the use of money and credit. The published findings did not provide study specifications, such as the sampling and instrument validation process. McKenzie's fourth grade participants scored a mean of 11.82 correct responses (SD = 2.76) or 56.28% correct. I calculated all the percentage results for this paper, as the published findings only provided the number of correct responses and total number of items. Open-ended responses disclosed that students having "professional" parents scored mean of 13.57 correct responses (64.61%) while students with parents of other employment scored mean of 11.08 correct responses (52.38%). McKenzie attributed the difference in results by students from different employment households to intelligence and to reading abilities.

During the same period, McKenzie administered the same instrument to district 7th graders. These students produced a mean of 15.44 correct responses (73.52%); (SD = 2.83). McKenzie observed that7th grader's results and students' reported parent employment held similar patterns found in the 4th grader results. He also reported that the results of urban 4th graders approximated that of rural 7th graders.

McKenzie's study established that abysmal to moderate levels (on a standard grading scale) of economic knowledge, including personal financial literacy, existed in students 4th and 7th grades, respectively, in that region. While the published findings contained statistics, they lacked analysis and interpretation. McKenzie did not comment on the low level of knowledge shown by children at the 4th grade level. While the 7th grade average performance provided some solace, the published findings did not disclose how the instrument related to the curriculums for the participants' grade levels. My review of the 1971-2000 citation indexes did not find any listings of McKenzie's study.

Holst (1999) noted that in our modern media age, a high amount of "child-focused consumption" exists, that industries label children as young as age three as consumers, and that toys increasingly limit children's creative play abilities. Holst also noted that deliberately putting off material rewards related to adolescent academic and social competence. Holst recommended several guidelines to prompt consumption-reduced early childhood classrooms; these guidelines included eliminating evidence of corporate influence, limiting commercially manufactured toys, utilization of community service projects, permitting only homemade/natural items for sharing. She also encouraged redirection of "toy talk" to "feelings of learning and enjoyment and redirection of commercial-based role-play into broader roles" (Holst, 1999, p. 23).

Martin and Oliva (2001) expressed the opinion that educators should begin addressing financial illiteracy with children in early childhood because of the long term consequences for not doing so. Mundrake and Brown (2001) wrote that students make spending decisions and explore career paths at an early age; ironically, they didn't mention any personal financial education ideas prior to a middle school business education curriculum.

To properly address the challenge of personal financial illiteracy, the research community should consider what levels of financial literacy exist, identify the associated

learning strengths and weaknesses, ascertain the influencing and motivating factors, and then provide recommendations for educational betterment based on research findings. The academic community appears to have followed this process well in the area of consumer education. McKenzie's (1970) study, over 30 years ago, appears to be the only comprehensive study of elementary students' personal financial literacy, however. No published research appears to have built upon these findings. Rather, the research on elementary students appears to focus on consumer patterns and influences, only a small part of the big personal financial literacy picture.

An interesting element of the above studies involves the largely culturally homogeneous nature of the samples. The described studies, from Marshall and Magruder (1960) forward, have either largely used only Caucasian samples or have not discerned between subjects of different cultures. The United States involves an increasing population of color (Hodgkinson, 2001). This population involves different histories, personalities, and behavioral characteristics (Banks, 2001; Ladson-Billings, 2000). Proper assessment of personal financial literacies should account for cultural considerations, especially considering the disparity of wealth distribution for the citizens of color in this country (U.S. Census Bureau, 2000).

Summary of Factors Revealed by this Literature Review

The review of the related literature indicates that the research focus on elementary school children involves homogeneous groups and home consumer socialization processes. Studies of adults, the role models for children, suggest that social and psychological factors relate to financial interpretations. However, financial learning does not appear to represent a static condition. As our societal and familial patterns and processes change, so may financial learning needs and conditions.

Chapter 3

Method

The purpose of this exploratory study is to measure elementary school students' personal financial literacy at the 4th grade level and to consider possible personal and social factors relating to student personal financial knowledge and application. Based on the review of literature, I expect the personal factors of gender, race and self-esteem, and the social characteristics of income level, method of learning, and outside of school activities appear to relate to personal financial literacy. The results of this study may commence an academic dialogue regarding the different facets and influences of personal financial literacy in children nearing transecency.

This study explores how seven characteristics (the personal factors of gender, race and self-esteem, and the social characteristics of income level, method of learning, and outside of school activities) may relate to 4th graders' financial literacy. The information from this study describes more about the personal learning characteristics and learning conditions for successful financial learning. These findings could provide a basis for further knowledge, research, and policy development in this important education area.

This section describes the selection of the subjects, the instrument, and the data collection and analysis to determine the relationships between seven student characteristics (gender, race, income, first language, outside activities, learning method, and self-esteem) personal financial literacy. The method of study was reviewed and approved by both the University of Memphis Institutional Review Board for the Protection of Human Subjects and by the Memphis City Schools Office of Research and Evaluation.

Selection of Subjects

The study sample was 4th grade students in the Memphis City Schools System, Memphis, Tennessee. Memphis is located in the southwest corner of Tennessee. During the year 2000, Memphis had 53,115 children ages 5-9 years. The city's population was

61.4% African American, 34.4% Caucasian American, 3.0% Hispanic or Latino, 1.7% Asian, and .5% Native American (U.S. Census Bureau, 2000a).The Memphis City Schools estimate 10,000 4th graders in their system. The surveyed schools were geographically distributed as follows: 2 in the southeast community of Memphis, recently acquired by the city; 2 in east Memphis; 1 in a semi-rural area of north Memphis; 2 in the midtown or airport vicinity; and 2 in the broader downtown Memphis area.

The study selected schools from a list provided by the local Junior Achievement offices. Reportedly, the schools on the list were either participating in the Junior Achievement programs at the time of the study or had been in the past. Junior Achievement, a nonprofit organization, provides free economic education in schools nationwide. The effectiveness of Junior Achievement programs in teaching economic knowledge and problem-solving skills has been measured by the Western Institute for Research Evaluation and Utah State University (Formative and Summative Evaluation, October 15, 1994; Formative and Summative Evaluation, August 11, 1995; Formative and Summative Evaluation, August 28, 1996; Formative and Summative Evaluation, August 11, 1997; Formative and Summative Evaluation, September 11, 1998; Formative and Summative Evaluation, August 30, 1999).

From the list of 23 schools participating in Junior Achievement programs, I selected eight schools from a geographic cross section of the sample. Of the principals of the eight schools originally asked to participate, three accepted and five declined. I broadened the selection process to select 20 schools, using established criteria for school selection. In total 11 principals agreed to participate in the study. One principal subsequently asked not to participate because of a unexpected personnel situation. One principal went through the process of qualifying students, and sending home permission slips, but then declined to participate because only two students returned their permission slips. Thus, students from nine schools participated in the study.

To control for student reading difficulties, I identified schools reporting combined average 3rd grade reading and language results at or above the 50th percentile on the Spring, 2001 TCAP results. The 2000-01 third grade class would be the 2001-02 fourth grade. Since the study involved responses to a written instrument, this qualification procedure process controlled for reading and language difficulties students might have.

The 4th grade students from each school represented the convenience sample. In schools where more than 50 fourth graders attended (or in schools having more than two homerooms), I asked the school principals to select two homerooms to participate. To screen the students for the study, I asked the schools to review students' TCAP results. To control for intelligence factors, school personnel averaged the reading and language percentile performances on students' Spring 2001 TCAP results. This process ensured confidentiality of individual TCAP scores. The study excluded students scoring in the 10th percentile or lower or in the 90th percentile or higher from participation. The schools determined number of eligible students in their classes for study, and provided the proper number of parent consent forms for their classes. Then the schools recorded and provided for me the total number of students in the intact homerooms, the number of qualifying students, the number of parental consent homes sent hone, and the number of consent forms returned.

In total, the process reviewed 405 fourth grade students' TCAP performances for study qualification. From eight of these schools containing 399 students, 318 qualified to participate; those who qualified received parent consent forms. Of these students, 159 returned consent forms to participate and 156 students actually participated in the study. One school sent home parent consent forms to 49 students and then qualified the eligible students from those returning permission-slips. That school had sixteen students participate in the study. In summary, the study surveyed 172 fourth grade students from nine Memphis City Schools. The students were geographically distributed as follows: 23 in

a southeast portion of Memphis, recently acquired by the city; 36 in east Memphis; 28 in a semi-rural area of north Memphis; 29 in the midtown or airport vicinity; and 56 in the broader downtown Memphis area.

Instrument

I developed a multiple choice format instrument containing 24 items asking about personal finance and 18 items asking about personal characteristics, perceptions, and practices for the study. The survey items were presented in a structured manner with personal items presented after the financial items. The instrument employed a bold 16 point font to prompt readability for students with visual disabilities. The instrument included clipart and pictures depicting relevant content to all items, except for those items involving student self-perceptions. The multiple choice items surveyed students' understanding of personal financial terms and surveyed students' abilities to apply this knowledge.

Content for the 24 personal financial literacy items was based upon the original curriculum guidelines established by the Jumpstart Coalition. Each item related to one or two of the four guideline areas, income, money management, spending and credit, and savings and investment. The instrument contained questions representing these areas in the following manner: Income, 4 questions; Money Management, 8 questions; Spending and Credit, 12 questions; Savings and Investment, 4 questions.

The instrument also contained items pertaining to students' personal characteristics. One item asked students to identify their genders. One item asked students to identify their races. To control for language reading challenges, one item asked students whether or not English was their first first-language.

The instrument contained items to determine students' social characteristics as well. It measured students' income statuses through responses to three items. These items related to student lunch status, bank account ownership, and parent/guardian employment.

The instrument contained a multiple choice structure for former two items and an open-ended response for the latter item.

One item instructed students to identify where they learned the most about managing money. It provided five choices for response: at home; at school, from teachers; at school, from Junior Achievement; magazines, books, television, radio; and talking with friends.

The instrument asked students how they spent most of their time outside of school. It provided five options for response: watching television; playing video games; on the computer; reading, and other. The instrument provided space for students to specify what other activities occupied their times.

The items measuring students' self-esteem were based on Harter's Self-Perception Profile for Children (SPPC) (*Test Critiques*, 1992). Harter's profile requires students to assess their abilities in six areas: academics, socialization, athletics, appearances, behavior, and worthiness. The SPPC presents items in a "structured alternative format" (Harter, 1982). Each item describes two degrees each of two alternative behaviors and requires the child to disclose which behavior best describes them. The SPPC also provides drawings depicting each alternative behavior.

This study's survey contained 10 items addressing five of the above areas (two items for each area) academics, socialization, athletics, appearances, and behavior. This writer developed five of the items, five of the items were examples provided in Harter's (1982) writing. No items pertained to worthiness. Silon and Harter (1985) found that students having a mental age of less than eight years cannot comprehend the concept of self- worth. Since students in fourth grade average 9 years of age, the instrument omitted items concerning the worth dimension to control for possible validity threats caused by comprehension variances. The instrument's self-esteem related items did not use pictures.

To ensure the instrument's reliability, the original Personal Finance Curriculum Standards for 4th grade, established by the Jumpstart Coalition, provided the instrument's content basis. Appendix B delineates these standards. The coalition revised these standards in January 2002, after the instrument's development. The coalition established standards in four areas: Income, Money Management, Spending and Credit, and Savings and Investments. The number of items in the terminology and application sections of the instrument were proportionate to the allocation of benchmarks within these four areas. The instrument contained questions representing these areas in the following manner: Income, 4 questions; Money Management, 8 questions; Spending and Credit, 12 questions; Savings and Investment, 4 questions. This distribution included two items where each represented more than one area, thereby compensating for overlapping of benchmarks between areas.

To ensure the validity of the instrument, I sent a pilot instrument to 4th grade teachers in 5 states. The teachers evaluated the instrument for readability at a 4th grade level, recognizing that some financial terms may not be readily understood. Another teacher read the instrument to gifted third- and gifted fifth-grade students in a suburban public school in the Memphis metropolitan area. There were 24 personal financial literacy items on the original instrument. Based on these teachers' recommendations, seven items were changed and five were reworded. The final revision contained 24 financial items and 18 personal items.

Data Collection and Analysis

The study administered the instrument from February of 2002 through May of 2002. Individual envelopes contained the instruments. Before surveying, I numbered these envelopes and their respective instruments for control purposes. In exchange for their signed parental consent forms, the students received the envelopes containing the

instrument. To preserve the anonymity of the participants and the schools, I distributed the packets in a non-sequential manner.

Either the homeroom teachers or I administered the instrument with either a school representative or me proctoring. Sosin et al. (1997) observed that reading surveys to students while having students read the test themselves, may control for gender reading differences. To compensate for both gender differences and possible student reading difficulties, the survey administrators read the items aloud to the participants. Students marked their copies of the instrument to respond to the items. Upon survey completion, students returned the instruments to the envelopes.

The analysis measured personal financial literacy in five dimensions. I determined a total or overall score on the 24 financial items. Besides a total score, the study measured students' knowledge of two of the four financial areas (money management and spending and credit). The small number of items associated to the other two Jumpstart benchmark categories did not lend to meaningful analysis. The study also measured student understanding of concept definitions and of concept applications.

To determine the students' total, money management, spending and credit, definitions and applications results, I recorded the students' responses to the items from their instruments on a self-formatted Lotus 123 spreadsheet. The spreadsheet calculated the participants' financial, income, and self-esteem scores based on input survey responses. The input process for the financial items assigned numbers 1-4 for responses A-D. The program compared the survey responses to a set of desired responses. If the survey item response matched the desired response, the spreadsheet assigned that item a value of 1, otherwise the spreadsheet assigned a "0". The spreadsheet added the score for each participant's 24 financial items to obtain a total score. The spreadsheet determined the Money Management, Spending and Credit, Definition, and Application totals by adding the item scores from the respective categories. The spreadsheet divided these totals

by the respective number of associated items. Percentage results from the spreadsheet, along with total income levels, total self-esteem levels, and other student characteristics were entered into the SPSS statistical analysis package.

The analysis interpreted personal characteristics in the following manners. First, it quantified student responses to gender, to race, and to first language. It assigned responses of "boy" the code of 1 and responses of "girl" the code of 2. It assigned race or orientation the following codes: White or Caucasian, 1; Black or African American, 2; Hispanic or Latino, 3; Asian, 4; and Native American or American Indian, 5. It coded first language responses as "English" 1, and "Other" 2.

The analysis interpreted social characteristics in the following manner. First, the income analysis quantified student responses about their lunches: free lunch, 0; reduced cost lunch from the cafeteria, 1; bring lunch from home, 2; buy lunch in the cafeteria, 3. The analysis quantified student responses about their financial accounts in the following manner: no account, 0; savings account, 1; certificate of deposit, 2; other, variable depending on the response.

The income analysis ranked the responses about parents' employment according to the four descriptions posed in a similar item in Jumpstart Coalition's 1997, 2000, and 2002 surveys: manual work, skilled trade, service worker, and professional worker. The analysis quantified responses to these questions on a scale of 1-4 to correspond directly with the choices on the Jumpstart surveys. For single earner households, the analysis divided the responses' total by 2. The analysis used the average of the two quantification results for two earner households. For example, a single earner in the "3" scale would be quantified at 1.5. Two earners categorized as 1 and 2 would be quantified as 1.5. This process properly discounted single-earner households to a comparable analysis basis with two-earner households. The analysis then scored the student's income level by adding this result to quantified responses of items for students' lunches and bank accounts.

Finally, the analysis of social factors quantified students' responses to learning method and outside activities sequentially in the order the choices for each item appeared on the survey. This order was the same as listed in the description above. While inputting survey data, it became evident that students readily provided other outside of school activities in the provided space. The analysis further categorized these activities into "play", "study", "home/family" and "other". The analysis quantified these created categories as numbers 5 through 8 respectively.

Esteem was analyzed in the following fashion. Esteem item responses were scored and totaled 1-4 based on students' responses to the 10 self-esteem items. Five of the items (34, 37, 38, 40, 41) were structured in an ascending order of esteem. That is, the first possible response was scored as "1" and the last possible response was scored "4". The other five esteem items (33, 35, 36, 39, 42) were structured in descending order of esteem. That is, the first possible response was scored "4" and the last possible response was scored "1". Possible levels ranged from 10-40. Because the instrument contained only two items from each esteem area, insufficient data existed to consider relationships with component self-esteem areas. However, this arrangement appeared to satisfactorily estimate students general esteem.

Pilot studies performed on the instrument providing the basis for the self-esteem items occurred in a homogeneous setting (*Test Critiques*, 1992). The standardization sample for Harter's instrument involved Caucasian children in Colorado. Cultural differences play large roles in learning styles, processes, and attitudes (Anderson, 1995a; Anderson, Huang, Waxman, & Weinsteen, 1997; Gauvin, Savage, & McCollum, 2000; Scott 1992; Scott & Marcus, 2000). Because pilot studies validated Harter's instrument for only Caucasian populations, the present study measured esteem relationships for the isolated Caucasian participants for comparison with other esteem findings. All the aforementioned correlation analyses utilized SPSS software.

Chapter 4

Results

The purpose of this exploratory study was to measure elementary school students' personal financial literacy at the 4th grade level and to consider possible personal and social factors relating to student personal financial knowledge and application. The following presentation describes the sample's financial literacy levels and the factors relating to this financial literacy.

Financial Literacy Levels

Table 1 details the sample's financial literacy results. On average, the students demonstrated very low personal financial literacy rates. Overall, the students' mean correct score was 44.84% (SD = 10.19). Liberal academic grading scales assign an "A" to a 90% correct score, a "B" to 80% correct, a "C" to 70% correct, and a "D" to a 60% correct score. Scores less than 60% would indicate students' non-mastery of the content. The average sample student's personal financial literacy result would not be a passing score this scale.

Table 1

Financial Literacy Summary Results

Measure Dimension	*M*	*SD*
Total	44.84%	10.19
Money Management	44.69%	16.62
Spending and Credit	42.68%	12.30
Definitions	39.92%	12.16
Applications	49.76%	15.29

Of 172 students participating in the study, only 15 (8.72%) provided the correct responses to 60% or more of the total items, which will be designated here as the "passing rate" (*PR*). Since four response choices existed for each financial item, and each survey item represented an independent event, the result of a student randomly selecting answers for this survey would be 25% .

The closest benchmark comparison to this result would be that from McKenzie's (1970) study ($M = 56.28\%$). The different instruments and the different samples involved with the two studies limit this comparison's extent. However, in both cases, it is important to observe that 4th graders did not demonstrate satisfactory personal financial literacy.

The students scored the highest component average on items involving the application measure dimension; however, the sample average did not indicate mastery of application items ($M = 49.76\%$); ($SD = 15.29$); ($PR = 18.60\%$). The *SD* associated with application dimension compared to the total, spending and credit, and definitions results suggest that student performance was more dispersed in this area. Table 2 summarizes the application scores.

Table 2

Summary - Application Scores

Score	Number of Students
16.67	2
25.00	10
33.33	31
41.67	30
50.00	30
58.33	37
66.67	17
75.00	6
83.33	9

Students' second highest component performance occurred on the money management measure dimension items (M = 44.69%); (SD = 16.62); (PR = 23.36%). The SD associated with the money management dimension results also suggests that student performance was more dispersed in this area also. Table 3 summarizes the money management scores.

Table 3

Money Management Scores

Score	Number of Students
12.50	9
25.00	27
37.50	48
50.00	48
62.50	29
75.00	6
87.50	5

The students also demonstrated poor knowledge in the spending and credit measure dimension (M = 42.68%); (SD = 12.30); (PR = 4.06%). The spending and credit results indicate participants possess slightly less knowledge of spending and credit concepts and applications than they do of total and money management concepts and applications.

The students demonstrated the least ability understand the meanings of financial concept definitions (M = 39.92%); (SD = 12.16); (PR = 2.90%). The definition results indicate participants displayed the less understanding of financial definitions of the four measured dimensions. Overall, students did not demonstrate passable understandings of the surveyed content in any measure dimension.

Before drawing conclusions affirming the students' low personal financial literacy, one should reconsider the survey instrument and its validity. The items conformed to the

Grade 4 benchmarks established by the Jumpstart Coalition, and teachers reviewed the pilot instrument for readability. To further explore the particulars of the low personal financial literacy, I reviewed items where less than 25% of the participants provided the desired responses. As mentioned above, the expected score for a student providing random responses would be 25%. Table 4 lists the items associated with the smallest percentages of correct responses. Appendix C contains the instrument.

Table 4

Least Correctly Answered Survey Items

Item Descriptions	% Responses
Definition of Creditworthy	10.67
Situation involving Credit	12.36
Example of a Consumer	12.92
Examples of Money	13.48
Example of a "Good"	15.17
Benefit of Bicycle Ownership	15.73
Definition of Working Capital	19.66
Definition of Opportunity Cost	23.60
Characteristics of Money	24.16

Less than one-fifth (19.66%) of the participants recognized the skills, education, and abilities workers as the definition of "human capital" (item 2). One of the 4th grade teachers (outside of Tennessee) reviewing this instrument indicated that "human capital" was not a concept covered in curriculum at that grade level. However, curriculum requirements vary between states, so what may represent 4th grade curriculum content in one state may not be representative in another. As an example of this variability, a 4th grade teacher in Memphis who reviewed had no objections to the content, so human capital may represent an appropriate 4th grade curriculum concept in Tennessee.

Interestingly, nearly two-thirds (64.61%) of the participants correctly responded to the item where they applied the concept of human capital. The difference between the correct response levels for working capital definition and application items indicates that while students may not recognize the concept's formal definition, they demonstrate potential for recognizing the concept in an application context.

A couple of items related to the money management dimension appeared particularly difficult for the participants. Less than one-fourth (23.60%) recognized the value of the best choice one could give-up as being the definition of "opportunity cost" (item 5). The weak recognition of the definition of opportunity cost may involve a terminological rather than a practical challenge. Almost three-fifths (59.55%) of the respondents properly determined the opportunity cost of a spending decision. This difference again suggests that students may demonstrate better recognition of practical context interpretations.

Less than one-fifth (15.73%) of participants distinguished faster transportation as a benefit of bicycle ownership from three responsibilities or costs (item 15). This item measured students' ability to apply an understanding of costs. Yet, nearly two-fifths (38.76%) correctly identified the proper applicable definition of cost. Factors explaining

this discrepancy could include the general applicability of the term, weak application abilities, or student inexperience with bicycles.

Students appeared especially challenged in providing desired responses to spending and credit dimension items. Slightly more than one-tenth recognized: the ability to get and pay-back loans as defining creditworthy (item 9), an example of credit (item 22), and an example goods and service purchases (item 23). Only 13.48% understood that Treasury Bills were not considered money (item 6). Less than one fifth (15.73%) could properly identify a Good(as opposed to a Service (item 19). Less than one-fourth (24.16%) knew that money was a limited resource (item 18). The instrument clearly described all of these items and 4th grade teachers had reviewed them for student readability. In addition, the survey's administration controlled for readability challenges. All of these conditions suggest weakness exist in the students' recognition of spending and credit concepts.

The study participants clearly demonstrated low personal financial literacy levels. A review of the items producing the least frequent desired responses suggests the poor levels result from sources other than the survey instrument itself. The next analysis step related these results to the students' personal and social characteristics.

Personal and Social Characteristics

The analysis examined relationships between each personal and social factor, and each of the five measure dimensions. Table 5 summarizes how each factor correlated to the different measure dimensions within the sample.

Table 5

Correlations: Student Factors and Measure Dimensions

Measure		Gender	Race	Language	Income	Method	Activity	Esteem
Total	*r*	-.082	**-.221	.023	**.243	-.068	-.026	.123
	p	.287	.004	.765	.002	.377	.734	.118
	N	172	171	172	160	172	171	162
Money Management	*r*	-.028	*-.173	-.062	*.190	-.022	.041	.129
	p	.717	.024	.416	.016	.779	.591	.102
	N	172	171	172	160	172	171	162
Spending	*r*	-.051	*-.185	.087	.149	-.088	-.007	.008
and	*p*	.509	.016	.258	.060	.253	.932	.923
Credit	*N*	172	171	172	160	172	.171	162
Definitions	*r*	-.028	*-.164	-.003	.115	-.027	.023	-.088
	p	.717	.034	.969	.147	.723	.765	.266
	N	172	171	172	160	172	171	162
Application	*r*	-.084	*-.163	.032	**.235	-.071	-.056	**.239
	p	.273	.034	.675	.003	.353	.465	.002
	N	172	171	172	160	172	171	162

** Correlation is significant at the 0.01 level.

* Correlation is significant at the 0.05 level

The analysis encompassing student gender, first language, method of learning or extracurricular activities as an individual difference variable yielded no statistically significant relationships; student race, however, was significantly correlated with the total ($r = -.221$, $p = .004$), money management ($r = -.173$, $p = .024$), spending and credit ($r = -.185$, $p = .016$), definitions ($r = -.164$, $p = .032$), and application results ($r = -.163$, $p = .034$). The analysis assigned Caucasians the value of 1, African Americans the value of 2. Caucasians yielded significantly higher scores than African-Americans.

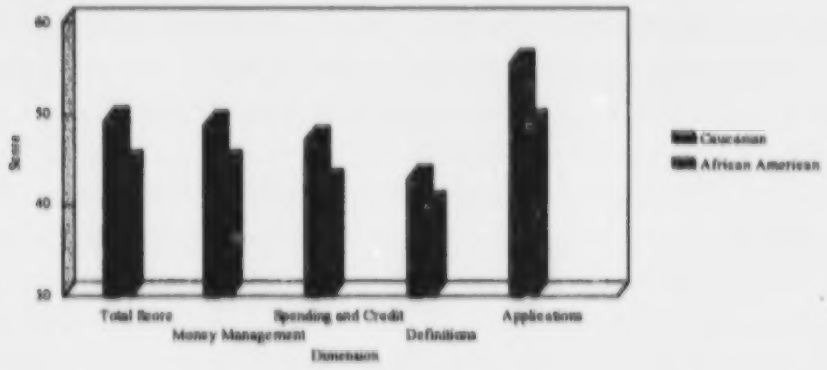

Figure 1. Average Scores by Race

Figure 1 depicts the average scores of the two student races dominating the sample. Of 171 students identifying their race, 154 or 90.05% of the students identified themselves as either Caucasian (16.75%) or African American (73.10%). Only three surveyed students identified themselves as Hispanic and three identified themselves as Asian. Eleven students (6.43%) identified themselves as Native American. The sample involved larger percentages of students identifying themselves as African American and Native American than in the general Memphis population contained in the 2000 census

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data. Because of the sample's concentration of African Americans, the following discussions focus on this culture.

Of the 125 students identifying themselves as African American students, 9 (7.20%) earned passing scores on the entire financial portion of the survey, 7 (5.60%) earned passing score on the money management measure dimension, 5 (4.00%) earned passing scores on the spending and credit measure dimension, 4 (3.20%) earned passing scores on the definitions measure dimension, and 21 (16.80%) earned passing scores on the applications measure dimension. Excepting the passing rate for the definitions measure dimension, all of these passing rates were slightly less than of the study sample overall. The African American passing rate for the definitions measure slightly exceeded that for the entire sample (2.90%).

The study found significant correlations between students' income and total (r = .243, p = .002), money management (r = .190, p = .016), and application (r = .235, p = .003) dimension results. In these three dimensions, scores increased as students' reported income increased. As described previously, the study determined students' income from their responses to three items. Figure 2 compares the average dimensional scores for students by income.

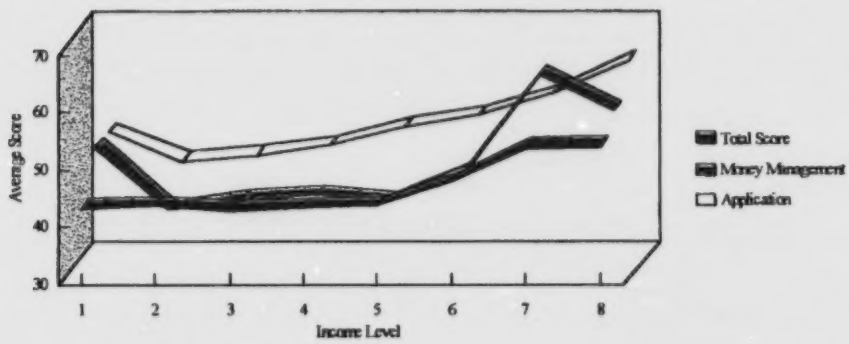

Figure 2. Financial Scores by Income Level

Self- esteem was significantly correlated with application results ($r = .239$, $p = .002$). As self-esteem increased, application increased.

As described earlier, the self-esteem measure represented the composite of five of Harter's six self-esteem dimensions. Students indicating higher levels of self-esteem scored higher on items of personal financial literacy application than those indicating lower levels. It is important to note that on a possible scale of 10-40, the lowest self-esteem score was 21. This correlation only relates differences in a portion of self-esteem range to the application of personal financial literacy. Figure 3 compares the application scores for students by self-esteem score. The descriptions for Low, Moderately Low, Moderately High, and High are defined within the context of the range of self-esteem scores.

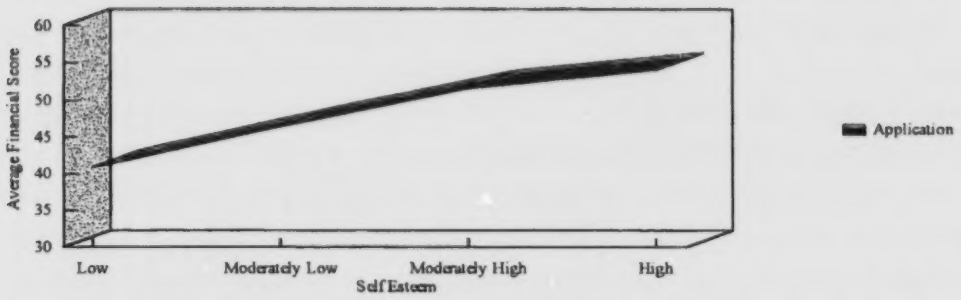

Figure 3. Average Financial Scores by Self-Esteem Levels

To summarize, the analysis found statistically significant relationships between three factors and with financial literacy measure dimensions. Only student race correlated significantly with all measure dimensions: total, money management, spending and credit, definitions, and applications. Income correlated significantly with the total, money management, and application dimensions. Students' esteem levels correlated significantly with the application measure dimension only.

The applications measure dimension correlated significantly with all three factors, race, income, and esteem. The total and money management measure dimensions correlated significantly with income and race only. The spending and credit and definitions dimensions correlated with race only.

Caucasian - Esteem Correlations

Because of the homogeneous nature of pilot studies associated with Harter's self-esteem instrument, the analysis sought relationships between the financial literacy measure dimensions with self-esteem results of Caucasian subjects. The analysis found no significant direct relationships between self-esteem and the five personal financial literacy

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measure dimensions. It's important to consider that only 29 students identifying themselves as Caucasian participated in the study. The table notes only 26 observations because some students had difficulties interpreting the survey's self-esteem items. The small sample may not be representative of larger populations.

African American Correlations

African Americans represented a majority of the surveyed students. The analysis evaluated relationships between each of the six relevant factors and the five measure personal financial literacy dimensions. Table 6 summarizes the findings of this analysis.

Table 6

Correlations: African American Students

Measure		Gender	Language	Income	Method	Activity	Esteem
Total Score	*r*	-.145	.046	*.211	-.147	-.108	.091
	p	.106	.614	.021	.103	.231	.328
	n	125	125	119	125	124	118
Money Management	*r*	-.035	-.056	*.184	-.059	.005	.097
	p	.695	.534	.045	.511	.956	.297
	n	125	125	119	125	124	118
Spending and Credit	*r*	-.116	.081	.121	-.125	-.088	-.003
	p	.198	.371	.192	.166	.333	.974
	n	125	125	119	125	124	118
Definitions	*r*	-.016	.063	.056	-.085	-.036	-.111
	p	.858	.486	.548	.347	.695	.232
	n	125	125	119	125	124	118
Application	*r*	-.174	.008	**.239	-.128	-.117	*.215
	p	.053	.925	.009	.155	.195	.020
	n	125	125	119	125	124	118

** Correlation is significant at the 0.01 level.

* Correlation is significant at the 0.05 level

The analysis encompassing African American student gender, first language, method of learning or extracurricular activities as an individual difference variable yielded no statistically significant relationships; African American student income however, correlated significantly with total ($r = .221$, $p = .016$), money management ($r = .191$, $p = .038$), and application ($r = .254$, $p = .006$) scores. Financial literacies generally increased as students' reported income increased. Figure 4 depicts the average dimensional scores for African American students by income.

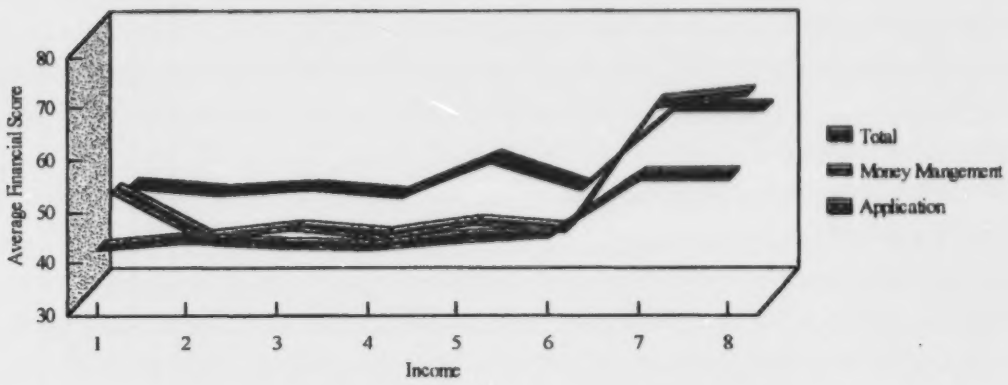

Figure 4. African American Financial Scores by Income Level

The analysis found African American students' self-esteem was significantly correlated with application measure dimension results ($r = .210$, $p = .023$). African American students indicating higher levels of self-esteem generally scored higher on items involving personal financial literacy application than those indicating lower levels. The

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lowest African American self-esteem score was 21 and the highest was 40. Figure 5 compares the application scores for African American students by self-esteem.

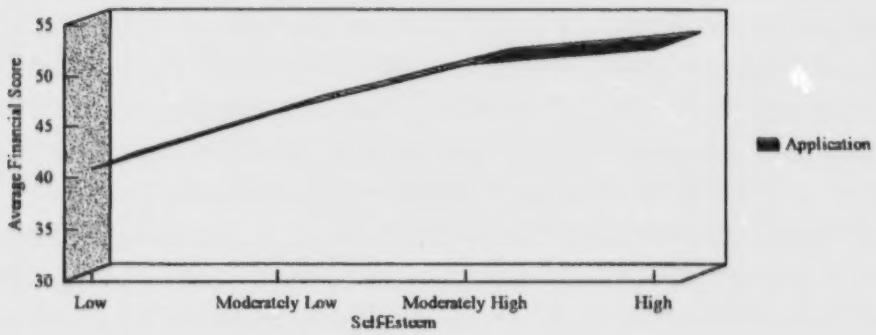

Figure 5. Average Financial Scores, African American Students by Self-Esteem Level

To summarize, the analysis found statistically significant relationships between the African American personal and social factors and with financial literacy measures. African American student income, only, correlated significantly with total, money management, and application measure dimensions. African American students' esteem levels correlated significantly with the application measure dimension only.

The applications measure dimension correlated significantly with both African American students' income and esteem. The total and money management measure dimensions correlated significantly with African American students' income only.

Chapter 5

Conclusions

Discussion of Results

This study found poor financial literacy levels in the 4th graders sampled. This finding appears to be consistent with the earlier study of 4th graders (McKenzie, 1970) and recent studies of teenagers (ASEC, 1999; Jumpstart Coalition, 1997, 2000, 2002). The sample's high percentage of African American students represents an important study element, given the limited amount of research previously conducted on this cultural group.

At the 4th grade level, children's money management (consumer) skills should be in the middle of John's (1999) Analytical Stage of consumer socialization. According to this stage, children's knowledge structures contain an abstract orientation with a functional/underlying feature focus, and involve complexities of two or more dimensions, and employ a dual perspective. At this stage, children's decision making and influence strategies should involve a thoughtful orientation with a functional/underlying feature focus, and should involve complexities of two or more dimensions with an expanded repertoire of strategies. They should demonstrate moderate adaptively and should be able to employ a dual perspective. On average, the students' performances on the survey's money management and spending and credit measure dimensions indicated that the students surveyed do not possess knowledge consistent with this stage of consumer socialization. The following information provides some considerations for future research into factors related to this shortcoming.

African Americans had lower financial literacy levels than their Caucasian counterparts in all dimensions. This finding suggests that economically based societal equities can be detected early and should be addressed early in child development. The correlations found by this study may properly be interpreted within our existing historical and societal contexts. Much has been written about the African American struggles for

educational and societal equities and about educator and systemic needs to be sympathetic to them (Banks, 2001; Ladson-Billings, 1994, 2000; Loewen, 1995; Lucey, 2002a; Morris & Morris, 2000; Oakes, 1992; Walker, 2000). Researchers have written about the history of efforts to suppress African American scholarship through theoretical and societal processes (Anderson, 1988; Banks, 1995; Loewen, 1995; Orfield, 2001). Multicultural education research demonstrates that struggle for societal equity involves other American minority cultures as well (Collignon, Men, & Tan, 2001; Gonzalez, 2001; Inglebret & Pavel, 2000; Sipes, 1989). Given the practical importance of personal financial literacy in our capitalist setting, our educational settings require more open dialogue about our systemic cultural disparities and their effects on student achievement and development (Pollack, 2001). Further research should provide a basis for such dialogues.

Low-income students have lower financial levels than high-income students. This study found statistically significant correlations between student income and total score, money management, and application measure dimensions of personal financial literacy. This finding suggests that schools might need to target low-income students for instruction. Research documents an economic relationship to student achievement (Lindjord, 2000; Menacker, 1990). Future research should consider the learning conditions and behaviors associated with people of different conditions to increase the body of knowledge in this area.

The statistically significant correlations between esteem and application of personal financial literacy concepts affirms findings relating high student esteem to student achievement (Anderman et al., 2000; Anderson et al., 1997). Recent literature describes the importance of positive learning settings to bolstering students' self-efficacy and achievement (Ladson-Billings, 1994; Lucey, 2002; Morris & Morris, 2000; Walker, 2000). While correlations are weak, this study's findings merit further research of these observations.

The lack of direct correlations of personal financial literacy to learning methods has important implications. Previous research has affirmed that the home setting represents the dominant influence on financial learning and that no existing learning venues satisfactorily teach personal financial literacy (ASEC, 1999; Danes, 1994; Jumpstart Coalition, 1997, 2000, 2002; Moschis, 1985). This study found no significant differences between the effects of student perceived home and school influences on personal financial literacy learning. This study's findings indicate that all of the learning methods in both educational and domestic settings require better knowledge and processes to teach children information.

Unfortunately, a challenging setting exists, at best, to facilitate changes to existing processes. Educational materials and teaching techniques do not relate to stages of financial learning, (Brenner, 1998; Koeller, 1981), poor textbook quality generally exists, (Harmon et al. , 2000; Loewen,1995; Sternberg, 1996) and the financial industry does not generally offer objective educational classroom literature (Stanger, 1997). Absent a concrete understanding of sound financial tenets and practices (McKinney et al., 1990), educators do not possess the tools to critically evaluate the financial vehicles they are sold for retirement (Lankford, 1999; Roha, 1998), let alone classroom literature about personal finances.

Further research may provide better tools for helping teachers to understand and teach financial concepts. However, research - based processes encounter implementation challenges. Ross (2002) observes that problems with technically complex research documents, with inconsistent published research quality, with mixed and context specific research findings, and with biased research results challenge the adaptation of research to educational policy. These factors impair competitiveness against simplified brochures and pamphlets designed to prompt sales. These same processes threaten quality personal financial education learning environments.

I suggest that the financial element considered in these recommendations not only involves a selling dimension; it represents a motivational or political dimension as well. My experience indicates that teacher information sources involve sponsorship relationships with financial companies that impair access to objective financial information (B. Reap, personal communication, January 23, 2002; G. Hopkins, personal communication, April, 4, 2002). The composition of well meaning organizations may also unconsciously prompt such concerns, not only in the information provided, but in the developed curriculum standards (Lucey, 2001). To their credit, both the National Council for Economic Education and the Money2000 financial literacy appear to provide objective financial and economic education efforts. Ross recommends third party reviews and education of media and policy makers to alleviate such challenges. These recommendations represent the start of favorable safeguards against ties between funding and influence.

The home environment provides similar learning challenges. Bowen et al.'s (1997) review of literature on the consumer behaviors of low-income and minority households recognizes that different consumer behaviors and understandings in low income settings exist necessarily because of situational demands. Absent familial expertise, most formal financial learning may be attributed to fee and/or commission based financial advisors and representatives. Without commenting on the integrity of advice processes in these settings, these environments' cost prohibitiveness creates for unfair learning conditions that favor high-income households. While non-profit resources exist for budgeting and credit counseling assistance, I believe these resources often present stop-gap efforts to avert eminent financial failures.

Research demonstrates the importance of strong community and school relationships to support learning processes (Collignon et al., 2001; Morris & Morris, 2000). Future research should consider how these relationships may be used to better the financial education processes.

Limitations to Findings

The findings provide insight into 4th graders' personal financial comprehension. However, the non-randomized convenience sampling process nullifies any causality considerations. The following limitations to findings occur because of internal considerations.

First, the results of this study require duplication to confirm their accuracy. These efforts may consider revisiting the measure of income used. This study's three dimensional income measurement relied heavily on student interpretation of lunch processes, financial accounts, and parent employment. The quantification process involved a degree of subjectivity interpreting parent employment items. This judgement possibly affected the income correlations. In addition, student interpretations of lunch conditions may be impaired somewhat by student perception or ignorance of family lunch payment processes. Finally, the weakness of the correlations may be associated with the income measure. The analysis developed over nine levels of income. It is possible that correlations may be different using another income measure.

Another consideration involving the income measure involves whether it more closely measured the students' income or wealth. Lindjord (2000) observes that wealth, rather than income, explains gaps between Caucasian and African American test score achievement. She refers to Dalton Conley's book, "Being Black: Living in the Red," to support her position, commenting "...if test scores of black students are compared to scores of white students with the same family wealth, the achievement gap disappears." (p.6). This study's instrument used three items to determine income status. The lunch and parent occupation items are reasonable income determinates; the rationale for this observation should be self-evident in the former and school lunch status is based on proof of income. The bank account item may reflect either wealth or income, depending on the motivations and conditions of the respondents' families. When considering student

characteristics, future studies of children's financial literacy should consider ways of differentiating between wealth and income.

Studies should assess financial literacy levels and influences on elementary students in other regional, urban, economic, and cultural settings for comparison. Gandara, Gutierrez, and O'Hara (2001) observed how children in urban and rural settings possess different attitudes and values, findings from the most recent Jumpstart (2002) survey note the existence of regional differences in personal financial literacy of high school students, and Hodgkinson (2001) notes the United States involves sectional differences in population characteristics. In addition, research indicates that financial practices and learning considerations differ for populations of different economic, cultural and historical backgrounds (Bowen et al., 1997; Collignon et al, 2001; Gonzalez, 2001; Inglebret & Pavel, 2000; Ladson-Billings, 2000; Sipes, 1989) .

An interesting question arises from the significant correlation between self-esteem and financial application. How do the different components of self-esteem affect financial literacy? This question necessitates further research to consider the relationships between self-esteem components and financial literacy applications. Discovering these relationships could prompt creation of more effective positive learning processes and effective financial learning environments.

Finally, this survey's findings suggest that qualitative research would provide insight into the factors affecting personal financial literacy. Such research will necessarily involve children of all income levels and cultures. These perceptions echo Bowen et al.'s (1997) challenges to the economic and multicultural research communities. These challenges include studying families with low incomes to include substantial numbers of Caucasian Americans, and studying consumer relationships between low income and low educated populations. Bowen et al. also suggest oversampling resistant segments of society, exploring subject trusting data instruments, culturally conditioning research

questions, and using appropriate statistical techniques. Personal financial literacy represents a multicultural education issue. Research into the cultural influences of children's personal financial learning represents a crucial step to developing a culturally relevant personal economics curriculum.

Summary and Conclusion

Our society is increasingly becoming one where more people have less income and wealth and fewer people have more. It is incumbent upon the educational research community to find research based solutions to give children and communities of all cultures the intellectual tools for personal economic survival. The results of this study call for more research into bettering the personal financial literacy development processes for students of color, low-income, and low-esteem.

This study found a consistently very low rate of personal financial literacy in 4th grade students across all five measurement dimensions. These low rates occur regardless of the students' method of learning. Our children do not have the proper foundational knowledge to financially succeed. This situation occurs because inadequate personal financial literacy learning processes presently exist. Stronger research efforts are needed to provide solutions to these conditions.

The findings that race, income and self-esteem each correlate directly with personal financial literacy indicate the learning processes need to consider individual learning needs. Students of color, or low income, and of low esteem do not benefit from present learning processes to the degree that other students do. Research efforts should ascertain the learning conditions best suited for these students and provide solutions to prevent their low economic achievement.

These findings suggest personal financial literacy involves multicultural considerations that educational processes should consider. The research community needs to consider the relationships between different cultural contexts and influences on personal

financial literacy in elementary school children. Absent basic personal financial skills, children of color, low income, and of low esteem become challenged by a system that increasingly benefits smaller percentages of our population.

Effectively confronting this problem requires research and development of a culturally relevant personal economics curriculum. Absent such efforts, our future's wealthiest resource (our youth) stands to lose a strong element to its positive social development and mobility .

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Appendixes

Appendix A

John's Stages of Consumer Socialization Development

Consumer Socialization Stages

Characteristics	Perceptual Stage, 3-7 years	Analytical Stage, 7-11 years	Reflective Stage, 11-16 years
Knowledge Structures:			
Orientation	Concrete	Abstract	Abstract
Focus	Perceptual features	Functional/underlying features	Functional/underlying features
Complexity	Unidimensional Simple	Two or more dimension Contingent ("if-then")	Multidimensional Contingent ("if-then")
Perspective	Egocentric (own perspective)	Dual Perspective (Own+others)	Dual perspectives in social context
Decision-Making and influence strategies:			
Orientation	Expedient	Thoughtful	Strategic
Focus	Perceptual Features Salient Features	Functional/Underlying Features Relevant Features	Functional/Underlying Features Relevant Features
Complexity	Single Attributes	Two or more attributes	Multiple Attributes
	Limited Repertoire of strategies	Expanded Repertoire of	Complete repertoire of strategies
Adaptivity	Emerging	Moderate	Fully Developed
Perspective	Egocentric	Dual Perspectives	Dual Perspectives in social context

Source: John, 1999, p. 186.

Analytical Stage of Consumer Socialization
(Ages 7-11 years)

Advertising Knowledge

- Can distinguish ads from programs based on persuasive intent
- Believe ads lie and contain bias and deception - but do not use these "cognitive defenses"
- Negative attitudes toward ads

Transaction Knowledge:

Product and Brand Knowledge

- Increasing brand awareness, especially for child-relevant product categories
- Underlying or functional cue used to define product categories
- Increasing understanding of symbolic aspects of consumption
- Understand retail stores are owned to sell goods and make a profit

Shopping Knowledge and Skills

- Shopping scripts more complex, abstract, and with contingencies
- Prices based on theories of value

Decision-making skills and abilities:

Information Search

- Increased awareness of personal and mass media sources
- Gather information on functional as well as perceptual attributes
- Able to adapt to cost-benefit trade-offs

Product Evaluation

- Focus on important attribute information-functional and perceptual attitudes
- Use of two or more attributes

Decision Strategies

- Increase repertoire of strategies especially noncompensatory ones
- Capable of adapting strategies to tasks

Purchase influence and negotiation Strategies

- Expanded repertoire of strategies with bargaining and persuasion
- Developing abilities to adapt strategy to persons or situations

Consumer motives and Values:

Materialism

- Emerging understanding of value based on social meaning and significance.

Source: John, 1999, p. 204.

Appendix B

Jumpstart Coalition

Financial Education Benchmarks for Grade 4

Guideline: Income

Students will know that:

1: People can earn income by exchanging their human resource (mental and physical work) for wages and salaries.

2: Entrepreneurs are individuals who are willing to take risks to develop new products and start new businesses. They recognize new opportunities, enjoy working for themselves, and accept challenges.

3: Entrepreneurs accept the risks in organizing resources to produce goods and services, and they hope to earn a profit.

4: Human capital is the skills, education, and abilities human resources possess. When workers learn and practice new skills, they are improving their human capital.

5: When businesses purchase tools and equipment, they are improving physical capital.

Students could use this knowledge to:

1: Identify ways which children can earn income or times when children receive money as gifts. Identify workers in their community.

2:Identify entrepreneurs in their community and state. Interview these entrepreneurs or read biographies of other entrepreneurs and identify characteristics these individuals share.

3: Analyze the resources needed for a particular entrepreneur in their community. Explain that profit is what remains after the entrepreneur has paid all costs of production.

4: Explain how they invest in their human capital to improve a skill (math competition, playing an instrument, dancing, playing a sport).

5: Explain that better tools and technology improve output per worker.

Guideline: Money Management

Students will know that:

1: People make choices because they can't have everything they want.

2: A cost is what you give up when you decide to do something.

3: A benefit is something that satisfies your wants.

4: Opportunity cost is the value of the best alternative given up.

5: People can earn income by exchanging their human resources (mental and physical work) for wages or salaries.

6: Saving is the part of income not spent on taxes or consumption.

7: Savings accounts are deposits in a bank, savings and loan association, or credit union on which interest is received.

8: Checking accounts are deposits in banks, savings and loan associations, and credit unions upon which checks may be written, or money drawn with an ATM or debit card.

9: A check is a written request (the use of a debit/ATM card is an electronic request) to a bank, savings and loan association, or credit union to subtract a specified amount from a transactions account as a payment for a good or services or to withdraw cash.

10: A check register is a book or an electronic file in which the customer records the amount of each check written, to whom it was written, and the amount for which is was written. The customer also records deposits to the account and the amount of debits and withdrawals made using an ATM or debit card.

Students will use this knowledge to:

1: Identify choices that they and their families have made.

2: List the costs of buying and maintaining a bicycle (or other item).

3: List the benefits of buying and maintaining a bicycle (or other item).

4: Identify the opportunity cost of a spending decision they've made.

5: Give examples of ways that the children earn income for work they do and identify workers in their community.

6: Identify something for which they wish to save each week, and determine how long it will take them to reach their goal.

7: Select a community bank and learn about the requirements for opening a savings account (fees, minimums and so on) and the rate of interest paid on the account.

8:Explain that checks, ATM cards, and debit cards can be used to withdraw currency or purchase goods and services only if there is an adequate balance in the account.

9: Write checks

10: Maintain a check register.

Guideline: Spending and Credit

Students will know that:

1: Money is coins, currency, and checkable deposits.

2: Consumers are people who buy goods and services.

3: Goods are tangible things we buy and use.

4: Services are things people do for us.

5: The opportunity cost of spending now is the goods and services that could be consumed in the future.

6: The opportunity cost of saving is the goods and services that could be consumed in the present.

7: Checking accounts are deposits in banks, savings and loan associations, and credit unions upon which checks may be written or money withdrawn with an ATM or debit card.

8: A check is a written request (the use of a debit/ATM card is an electronic request) to the bank, saving and loan association, or credit union to subtract a specified amount from a transactions account as a payment for a good or service or to withdraw cash.

9: A check register is a book or an electronic file in which the customer records the amount of each check written, to whom it was written, and the amount for which it was written. The customer also records deposits to the account and the amount of debits or withdrawals made using an ATM or debit card.

10: Credit is a loan that must be repaid at a future time, usually with a fee.

11: Creditworthy is having the qualities that show the ability to obtain and repay loans.

12: A credit card is a card that allows the holder to make purchases today for which they will pay in the future.

13: Savings accounts are deposits in the banks, savings and loan associations, or credit unions on which interest is paid.

Students will use this knowledge to:

1: Explain the functions and characteristics of money.

2: Identify times when they or their family are consumers.

3: Identify a list of goods they want to purchase.

4: Identify a list of services they want to purchase.

5: Identify the opportunity cost of a spending decision they've made.

6: Identify the opportunity cost of a saving decision they've made.

7: Explain that checks, ATM cards, and debit cards can be used to withdraw currency or purchase goods and services only if there is money in the account.

8: Write checks.

9: Maintain a check register.

10: Identify various credit situations in their lives (borrowing with lunch money, borrowing paper in class, borrowing library books) and explain that the relationship between the borrower and lender is based on trust.

11: Explain that creditworthiness is determined by (demonstrated) behavior (in credit use).

12: Identify various types of credit cards. Explain that credit card companies earn revenue when consumers don't pay the full balance on their account each month.

13: Compare the advantages and disadvantages of placing savings in a savings account.

Guideline: Saving and Investing

Students will know that:

1: Savings is the part of income not spent on taxes or consumption.

2: The opportunity cost of saving is the goods and services that could be consumed in the present.

3: The opportunity cost of spending now is the goods and services that could be consumed in the future.

4: Banks, savings and loan associations, and credit unions are institutions where people save money and earn interest and where people borrow money and pay interest

5: There are various options for saving.

6: Saving accounts are deposits in banks, savings and loan associations, or credit unions on which interest is received.

Students could use this knowledge to:

1: Identify something for which they want to save, decide how much they can save each week, and determine how long it will take them to reach this goal.

2: Identify the opportunity cost of a saving decision they've made.

3: Identify the opportunity cost of a spending decision they've made.

4: Compare the services provided by different banks in their community.

5: Students will compare the advantages and disadvantages of locations to keep their savings, such as in a piggy bank, in a savings account, with their parents, or though the purchase of U.S. Savings Bonds.

6: Select a community bank and find out the requirement for opening a savings account (fees, minimum balance and so on) and the rate of interest paid.

Source: Jumpstart Coalition, 1999, n.p.

Appendix C

Thesis Instrument

4th Grade Financial Literacy and Personal Information Survey

Instructions:
Read the questions silently to yourself while your teacher or administrator reads them aloud. Except where the survey gives different directions, write the BEST response to each question in the spaces provided.

DO NOT READ QUESTIONS AHEAD OF YOUR TEACHER AND THE CLASS

DO NOT GO BACK AND LOOK AT QUESTIONS, WHICH YOU HAVE ALREADY ANSWERED.

When your teacher tells you, you may turn this page and begin the survey.

1. ___ How do you earn income?

a. Get paid by doing work

b. Winning the lottery

c. Both are forms of income.

d. None of the above are income.

2. ___ What is the term for the skills, education, and abilities that workers have?

a. Human Capital

b. Human Worth

c. Net Capital

d. Net Worth

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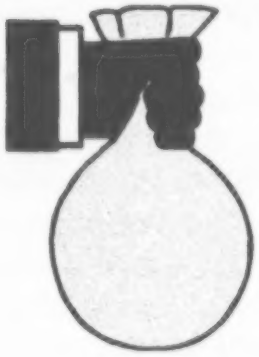
3. _____ What is Cost?



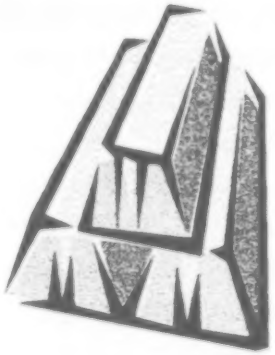
a. What you give up when you decide to do something.

b. How much money you have in the bank.

c. How much you get for doing something.

d. What happens when a business does not make a profit.

4. _____ What part of income is neither spent nor used to pay taxes?



a. Expenses

b. Insurance

c. Profits

d. Savings

5. _____ What is the term for the value of the best choice you could give up?

a. Changed money

b. Lost Capital

c. Opportunity Cost

d. Wasted Funds

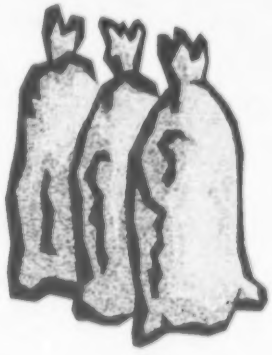
6. ____ Which of the following choices is NOT money?

a. Coins

b. Currency

c. Checkable Accounts

d. Treasury Bills



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7. ____ Which of the following choices is a Service?

a. Banana

b. Bicycle

c. Bus Ride

d. CD disc

8. ____ What is the term for a card that allows you to buy things today which you will pay for later?

a. ATM Card

b. Credit Card

c. Debit Card

d. Library Card

9. ____ What is being able to get and pay-back loans called?

a. Borrower

b. Creditable

c. Creditworthy

d. Debtor

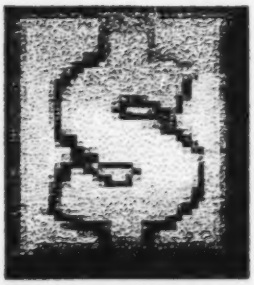
10. ___ A loan that must be paid at a future time, usually with a fee is called....?

a. Credit

b. Note

c. Order

d. Request



11. ___ People who buy goods and services are called:

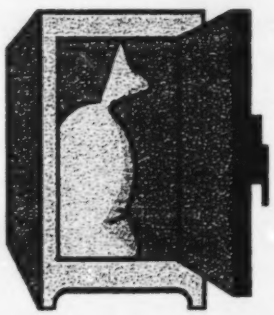
a. Merchants

b. Entrepreneurs

c. Consumers

d. Investors

12. ___ You save and borrow money in all of the following places except...



a. Banks

b. Credit Unions

c. Stock Markets

d. Savings and Loan Associations

13. ___ Which of the following choices is NOT a source of income?

a. Gift of money on your birthday

b. Allowance at home

c. Interest paid on an account at the bank

d. Buying a Stock

14. ___ Which of the following examples would show your investing in yourself?

a. Working on Math problems

b. Listening to CDs

c. Watching Television

d. All of the above

15. ____ Which of the following choices is a benefit of owning a bicycle?

a. Putting air in the tires

b. Riding faster than walking

c. Putting the bike away when finished

d. Locking the bike up when leaving it alone in public.

16. ____ You will save $11 each week to buy a $132 Bicycle. How long will it take you to save enough to buy it?

a. 10 weeks

b. 11 weeks

c. 12 weeks

d. 13 weeks

17. ___ You just spent all of your money buying candy. What was the opportunity cost of your choice?

a. Putting it into a bank account.

b. Spending on a music CD.

c. Lending it to a friend.

d. Using a credit card.

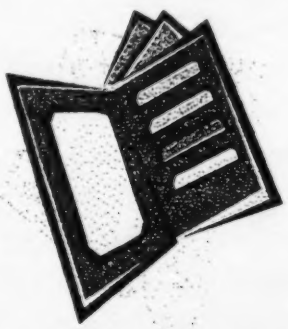
18. ___ All of the following sentences about money are true except...

a. It takes the place of something of value.

b. It is a symbol of something permanent

c. It is recognized in most places.

d. It is unlimited in amount.



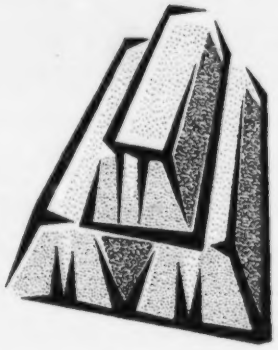
19. ___ Which of the following choices is a Good?

a. Hair Cut

b. Bicycle

c. Bus Ride

d. Education



20. ___ If your credit card balance is not paid by the end of the month, then...

a. you get cash back.

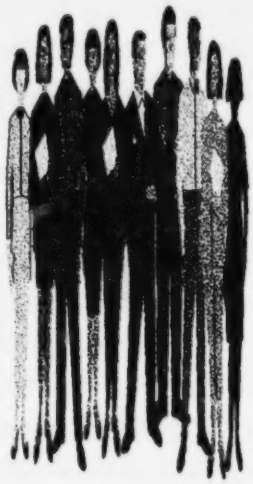
b. you get to use it again and again without penalty.

c. the credit card company earns income.

d. nothing will happen, credit cards don't need to be paid back.

21. ___ Who is the most creditworthy person?

a. Jim comes to school when he's in the mood, does his home-work when he wants to.



b. Maria is always at school on-time and does the home work when she's told.

c. Jorge is always trying to borrow something from somebody.

d. You don't know Erin, no one talks about her, yet Erin says she's a good girl.

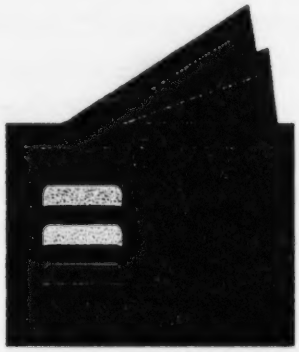
22. ___ Which of the following choices involves credit?

a. A gift from a relative.

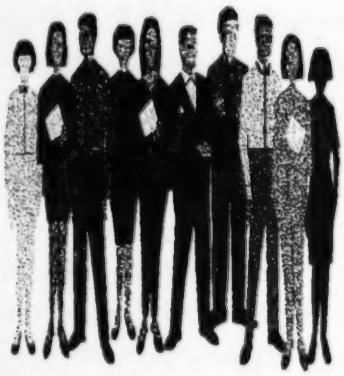
b. Paying taxes.

c. Paying for a soda.

d. Checking out library books.



23. ___ Which is an example of being a consumer?



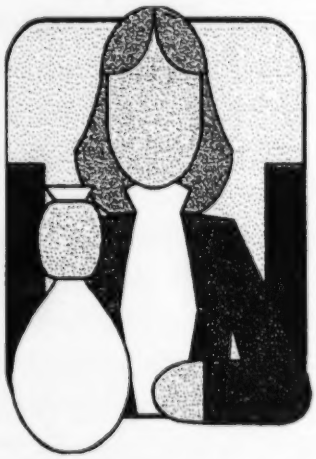
a. When you last visited the zoo

b. When you last went for groceries.

c. All of the above

d. None of the above

24. _____ You have $115 to open a savings account. Which of the following banks provides the best overall terms for saving?



a. Minimum Balance of $100, or a $7/month fee. Pays 1 % interest.

b. Minimum Balance of $200, or a $8/month fee. Pays 2 % interest.

c. Minimum Balance of $100, or a $8/month fee. Pays 2 % interest.

d. Minimum Balance of $200, or a $7/month fee. Pays 1 % interest.

25. I am a.....

A. Boy

B. Girl

26. ___ I consider myself to be.....

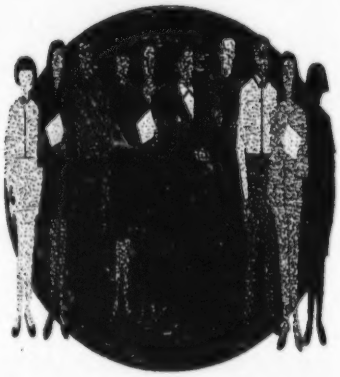
A. White or Caucasian

B. Black or African-American

C. Hispanic American

D. Asian American

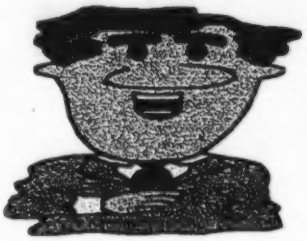
E. Native American or American Indian



27. ___ My first language is .....

A. English.

B. Other



28. ___ For lunch at school, I usually.....

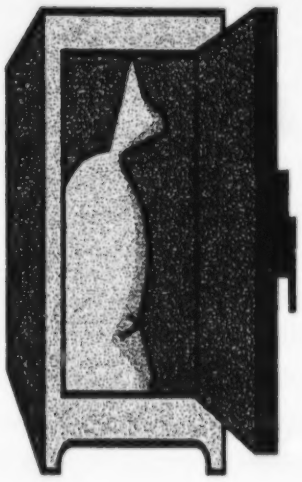
A. bring lunch from home.

B. buy lunch from the cafeteria.

C. buy a reduced cost lunch from the cafeteria.

D. get a free lunch from the cafeteria.

29. _____ At the bank I have.....



(List all that apply)

A. No bank account.

B. A Savings Account.

C. A Certificate of Deposit

D. Other account (type)

_____

30. My parent(s) or guardian(s) work as a.....

_____

_____

31._____ I learn the most about managing money.....

A. At home

B. At school, from teachers

C. At school, from Junior Achievement

D. Magazines, books, TV, radio

E. Talking with friends.

32. Outside of school, I spend most of my time...

A. Watching TV

B. Playing Video Games

C. On the computer

D. Reading

E. Other _____

For the following questions, mark which response is MOST like you.

Really True of Me	Sort of True of Me		Sort of True of Me	Really True of Me
33.				
	Some children are good at school work.		Some children worry about school work.	
_____	_____		_____	_____
34.	Some children have trouble in all sports.		Some children do well at all sports.	
_____	_____		_____	_____
35.	Some children have a lot of friends.		Some children do not have many friends.	
_____	_____		_____	_____
36.	Some children have nice looking faces.		Some children do not have faces which look nice.	
_____	_____		_____	_____

For the following questions, mark which response is MOST like you.

Really True of Me	Sort of True of Me		Sort of True of Me	Really True of Me
37.				
	Some children get into trouble a lot.		Some children do not get into trouble.	
_____	_____		_____	_____
38.				
	Some children have trouble with reading.		Some children understand what they read.	
_____	_____		_____	_____
39.				
	Some children would rather play sports.		Some children would rather watch sports.	
_____	_____		_____	_____

For the following questions, mark which response MOST like you.

Really True of Me	Sort of True of Me		Sort of True of Me	Really True of Me
40.	Some children are hard to like.	Some children are easy to like.		
_____	_____		_____	_____
41.	Some children do not look nice overall.	Some children look nice .		
_____	_____		_____	_____
42.	Some children are kind toward others.	Some children do not treat others well.		
_____	_____		_____	_____

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Signature:	Printed Name/Position/Title: Thomas A. Lucey
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